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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,337	12/31/2003	Klaus Hartig	44046.203.277.1	4701

22859 7590 07/21/2006

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EXAMINER

MOORE, KARLA A

ART UNIT PAPER NUMBER

1763

DATE MAILED: 07/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
4a) Of the above claim(s) 22-38 and 47 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 48 and 49 is/are allowed.
- 6) ☒ Claim(s) 1-9, 12-21, 39-42, 45 and 46 is/are rejected.
- 7) ☒ Claim(s) 10, 11, 43 and 44 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION***Election/Restrictions***

1. Applicant's election with traverse of Group 1 in the reply filed on 12 May 2006 is acknowledged. The traversal is on the ground(s) that a) the two groups have a similarity and therefore should be examined together; and b) examination of both inventions would not be a serious burden. These reasons are not found persuasive because: with respect to a) this is not the criteria for consideration of two inventions in a single application; and with respect to b) this is untrue. Each of the inventions has separate classification and therefore separate search. While there be some overlap, one by no means encompasses the other and examination of both inventions would require substantially more search and consideration.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-9, 12-21, 39-42 and 45-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/37377 to Krisko et al. in view of U.S. Patent No. 5,958,134 to Yasar et al.

4. Krisko et al. disclose the invention substantially as claimed and comprising: a method of processing a sheet-like substrate (Figure 5, 10), the method comprising: a) providing a coater adapted for supplying coating onto the substrate, the coater comprising a substrate support (310) defining a path of substrate travel extending through the coater, a downward coating apparatus (326) positioned above the path of substrate travel; b) conveying the substrate along the path of substrate travel; c) and operating

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the downward coating apparatus to coat a top major surface of the substrate. See page 18, row 12 through page 20, row 12.

5. However, while Krisko et al. do teach processing the bottom surface of the substrate and that material intended for the top surface may inadvertently be deposited on the bottom surface Krisko et al. fail to teach providing an ion gun positioned beneath the path of substrate travel, wherein the ion gun is at a location further along the path of the substrate travel than the downward coating apparatus and operating the gun to emit an ion beam toward a bottom major surface of the substrate, said operation of the ion gun being performed to remove from the bottom major surface of the substrate any oversprayed coating that was inadvertently deposited upon marginal portions of the bottom major surface of the substrate during said operation of the downward coating apparatus.

6. Yasar et al. teach providing a coating station and then subsequently an ion gun etching station capable of etching various surfaces of a substrate for the purpose of removing and shaping coated material to produce a desired geometry and other physical characteristics (column 6, rows 42-46).

7. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided an ion gun etching station in Krisko et al. in order to remove and shape the coated material to produce a desired geometry and other physical characteristics as taught by Yasar et al.

8. With respect to claim 2, the substrate is maintained in a horizontal orientation during said conveyance of the substrate along the path of substrate travel (see Figure 5).

9. With respect to claim 3, the substrate is a sheet of glass that is on the substrate support during conveyance, and wherein other sheets of glass are also on the substrate support, such sheets of glass being spaced-apart from one another on the substrate support and conveyed in such a spaced-apart configuration (see Figure 5 and abstract).

10. With respect to claim 4, the substrate support comprises a plurality of spaced-apart transport rollers (310), the method comprising rotating at least one of the transport rollers to achieve conveyance of the substrate along the path of substrate travel.

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11. With respect to claim 5, all of the upwardly facing processing apparatus of Krisko et al. emit processing materials between adjacent pairs of spaced-apart transport rollers. It would be obvious to have the ion guns do the same.

12. With respect to claims 6-8, Krisko et al. teach that the downward coating apparatus are sputtering apparatus comprising an upper sputtering target (326) positioned above the path of substrate travel, and wherein said operation of the downward coating apparatus comprises establishing a plasma adjacent said upper sputtering target (page 19, rows 1-6).

13. With respect to claim 9, the method further comprises providing an upward coating apparatus, the upward coating apparatus being positioned beneath the path of substrate travel at a location further along the path of substrate travel than the ion gun would be (361), the method comprising operating the upward coating apparatus to coat a bottom major surface of the substrate after said operation of said ion gun has removed any oversprayed coating from the bottom major surface of the substrate.

14. With respect to claim 12, said operation of the upward coating is performed in the final chamber of the coater (see Figure 5 and column 20, rows 1-12).

15. With respect to claims 13 and 14, the bottom major surface of the substrate is coated with a coating having a total optical thickness of less than about 690 angstroms (page 4, rows 23-25) and the top major surface is coated with a coating having a total optical thickness of at least about 1000 angstroms (page 8, row 26 through page 9, row 3).

16. With respect to claims 15-17, the operation of the upward coating apparatus comprises depositing on the bottom major surface of the substrate a photocatalytic surface-effect coating comprising titanium oxide (page 13, row 25 and page 20, rows 1-21).

17. With respect to claim 18-21, Krisko et al. teach that the upward apparatus may comprise a plurality of sputtering apparatus comprising a lower sputtering target (column 20, rows 1-12) positioned beneath the path of substrate travel, and wherein said operation of the upward coating apparatus comprises establishing a plasma adjacent said lower sputtering target. Krisko et al. do not explicitly disclose that the coating can be supplied by other types of commonly known vacuum coating means, however, the courts have ruled that an express suggestion to substitute one equivalent component or

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process for another is not necessary to render such substitution obvious. In re Fout, 675 F.2d 297, 213 USPQ 532 (CCPA 1982). It would have been obvious to one of ordinary skill in the art that other types of coating means could be used to form films in the apparatus of Krisko et al. without departure from the spirit of the invention.

18. With respect to claims 39-42 and 45-46, each of the limitations is addressed above in the rejections of similar claims 1-9 and 12-21.

Allowable Subject Matter

19. Claims 48 and 49 are allowed.

20. Claims 10-11 and 43-44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

21. The following is an examiner's statement of reasons for allowance/reasons for indicating allowable subject matter: The prior art of record fails to fairly teach or suggest the upward coating is performed after all other coating of the substrate has been performed, or in other words, that the substrate is not conveyed beneath any operating downward coating apparatus, such that marginal portions of coating applied to the bottom major surface will not be concealed by over sprayed coating from any subsequent downward coating apparatus in the coater.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

22. Applicant's arguments filed 12 May 2006 have been fully considered but they are not persuasive.

23. In response to applicant's arguments against the references individually, which are the entirety of Applicant's arguments, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871

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(CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Krisko was the primary reference relied upon, not Yasar. However, in Applicant's arguments the supposed failure of Yasar to disclose the entirety of the claims is pointed out. Applicant's arguments against Yasar are based on subject matter for which Krisko was relied upon, not Yasar.

24. Examiner also notes in response to Applicant's argument that Yasar does not have the exact same reasoning for providing claimed features as disclosed in Applicant's specification, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Conclusion

25. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karla Moore whose telephone number is 571.272.1440. The examiner can normally be reached on Monday-Friday, 9:00 am-6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571.272.1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Karla Moore
Primary Examiner
Art Unit 1763
18 July 2006